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# United States Patent [19]

Plesko

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[54] **ELECTRO-OPTICAL SCANNING SYSTEM WITH GYRATING SCAN HEAD**

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[58] Field of Search ..... 235/467, 470, 472; 250/235, 236; 358/208; 359/196

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Attorney, Agent, or Firm—Reed Smith Shaw & McClay[57] **ABSTRACT**

A compact beam scanning information readout device and method for reading bar code or other information requires little or no orientation of the information to be scanned by virtue of its raster or omni directional scan capabilities. Only a single mirror is needed to generate two dimensional scans. A wide range of scan speeds are also possible for simple or complex one or two dimensional patterns. Scanning in two dimensions may be done with independent and continuous control of the scan in each dimension. The scan patterns may be electronically controlled to instantly achieve various orientations ranging from a straight line rotated about a point to continuously rotating complex patterns. A light collector, light detector, processor, and means of signal transmission are also included. In one embodiment the device is packaged in a housing resembling a wand or a thin flashlight and in another embodiment the device is packaged in a ceiling mountable housing which will not interfere with counter top work space. The invention is useful wherever beam scanning equipment is used especially for barcode scanning, pattern recognition, general beam positioning, and many other scanning applications.

65 Claims, 15 Drawing Sheets

